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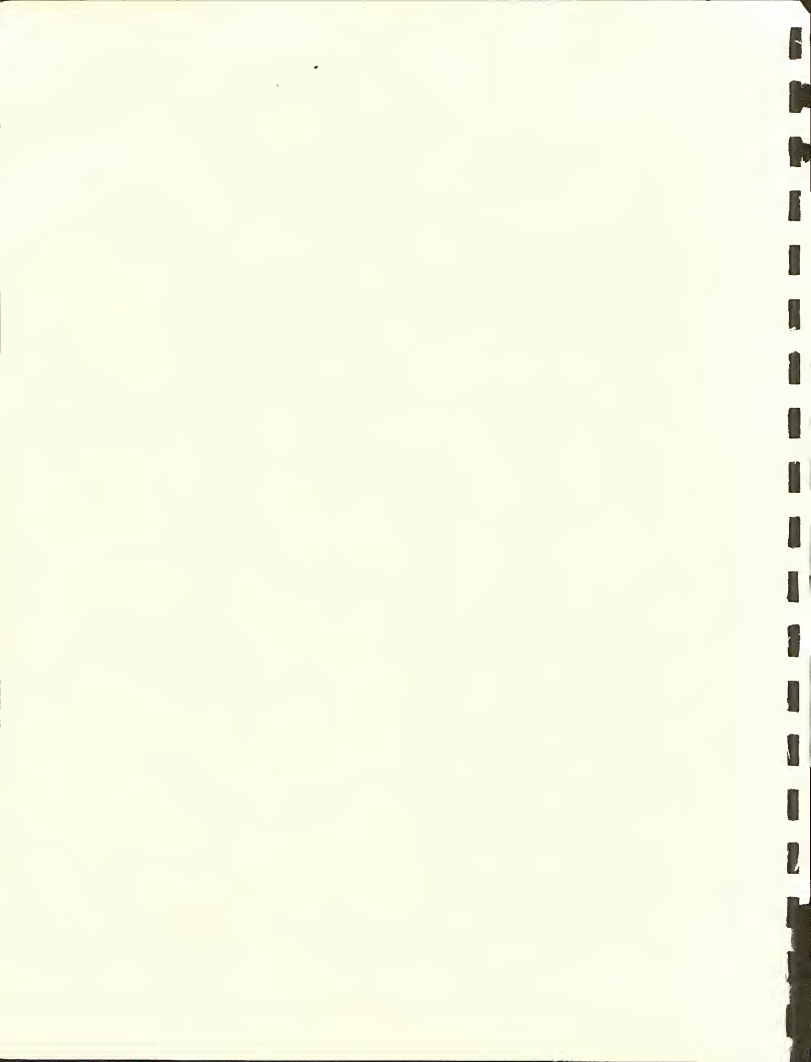
HISTORICAL AND ARCHAEOLOGICAL INVESTIGATIONS

(CRNV-03-1119) of the (CRNV-03-1120)
ROCK CREEK STAGE AND TELEGRAPH STATIONS

by
Donald L. Hardesty

REPORT PREPARED
for the
BUREAU OF LAND MANAGEMENT
1978

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INTRODUCTION

In the spring of 1978 the Bureau of Land Management contracted with the University of Nevada, Reno (Contract No. NV950-CT8-0011) to conduct preliminary historical and archaeological studies on two historic sites, designated as Rock Creek Stage Station (Cr-Nv-03-1119) and Rock Creek Telegraph Station (Cr-Nv-03-1120). Both belong to a complex of 19th century transportation and communications facilities tying together the eastern "heartland" of American civilization with its expanding western frontier. The sites are situated in the Edwards Creek Valley alongside U.S. Route 50 at a point 60 miles east of Fallon, Nevada (Figure 1). (The Universal Transverse Mercator location of Cr-Nv-03-1119 is N4,360,260/E426,440 in Zone 11 and of Cr-Nv-03-1120 is N4,360,720/E426,780 in the same zone.) Intermittent streams flow within a few yards of both sites -- Pony Canyon creek past the stage station and Cold Springs creek past the telegraph station -- but dug wells were apparently the main source of water. Cold Springs pony express station (CR-NV-03-07) is also situated on Pony Canyon creek about 1½ miles further upstream toward Pony Canyon (Hardesty 1976). Both streams originate in the Desatoya Mountains and are part of the Edwards Creek Valley drainage system. The two sites are situated upon an alluvial fan of Quaternary age that is covered with rhyolitic boulders from more recent debris flows (v. Hardesty 1976:1). As was the case at Cold Springs pony express station, the building walls of the stage and telegraph station are constructed by selecting appropriate size boulders from the flow. The common flora and fauna in the vicinity are typical for the Northern Desert Shrub community (v. Hardesty 1976: Appendix 1).

The fieldwork for the project took place during June and July, 1978, under the direction of the author. Crew members included Debra Jean McNeil, Maribeth Hamby, Susan Seck, Alice Becker, and Jennifer Jack. The documentary and oral history research was done by Kathryn Totton. Reb Bennett kindly consented to identify the bottle glass.

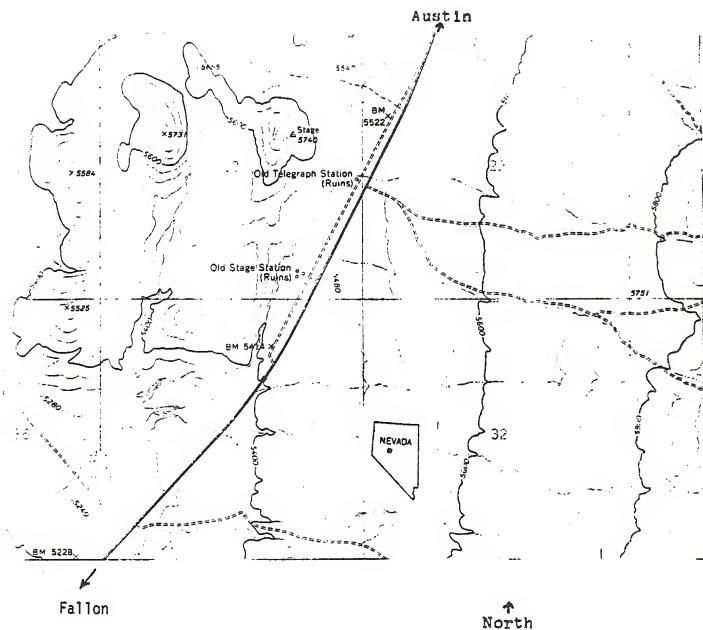


FIGURE 1. LOCATION MAP OF ROCK CREEK SITES
(Scale = 1:24,000)

GOALS AND RESEARCH STRATEGY

The Rock Creek sites are part of a BLM designated historical/recreation area that also includes Cold Springs and Sand Springs pony express stations (Hardesty 1976, 1977). Part of the planning effort is to evaluate the significance of these sites from both the historical and archaeological point of view and that is the major thrust of the present study. Within that thrust, more specific goals can be described: (1) a more precise identification of what the Rock Creek sites were used for and when they were occupied; (2) an assessment of the significance of the archaeological record of the two sites; (3) a set of recommendations for the management of the Rock Creek sites; and (4) preparation of the sites for visitor impact.

The strategies designed to accomplish these goals combine documentary/oral history methods and archaeological methods. Goal 4 is a strictly archaeological strategy that involves an assessment/inventory of material remains in and around the sites and a surface collection of all artifacts within the buildings and within a high impact 10 meter wide zone outside the walls. In addition the strategy requires an assessment of the need for future stabilization of the standing structures. Archaeological significance per se, goal 2, will be assessed in much the same way as the buildings at nearby Fort Churchill (Hardesty 1978:207-210). The criteria used to "rate" the significance of the archaeological record are: (1) unique function -- how unique are the activities that took place within the site; (2) stratigraphic integrity -- is the archaeological record disturbed or not; (3) artifact pattern value -- are the artifacts extremely informative as clues to human behavior or not; (4) archaeological/

documentary consistency -- are the archaeological and documentary records in agreement or is there an inconsistency; (5) architectural integrity -- are the buildings in good condition; and (6) documentary record -- how good are written sources? Goal 1 is to be accomplished with a two stage strategy. The first stage is a search of newspaper accounts, government records, personal journals, and other documentary sources for information about the kinds of activities that took place at Rock Creek Stage and Telegraph Stations and their chronology. To this are added interviews with informants who were familiar with the region around the turn of the century. The second stage is a program of test excavations and surface collection to estimate the range and variability of the archaeological record.

THE HISTORICAL RECORD

by Kathryn D. Totton

The historical record, both documentary and oral, regarding the Rock Creek, Cold Springs, Sand Springs area is somewhat sparse. This may be attributed to a number of factors, including the area's isolation, especially in the 19th century, from the major population centers of the state; lack of interest or ability in record keeping on the part of those who lived and worked at the stations; and of course, the passing on of those who knew these areas as working stations. The matter is further complicated in the case of Rock Creek and Cold Springs by the fact that the name Cold Springs was apparently used to refer to both sites. The name Rock Creek or Rock Canyon does not appear in the historical record; in the following section, however, to avoid confusion Rock Creek will be used to refer to the site currently being studied, while Cold Springs will be the original Pony Express station site.¹

DOCUMENTARY HISTORY

Rock Creek, Cold Springs, and Sand Springs stations and dozens like them across the West were key factors in the development of a transportation and communications network in the Far West prior to the completion in 1869 of the first transcontinental railroad. The discovery of gold in California in 1848 and of silver in 1859 in Nevada had caused a tremendous increase in the population of those areas and a corresponding increase in the demand for a regular, reliable and rapid means of communication with the eastern half of the nation. As a result, the federal government began to award mail contracts to private firms and to sponsor explorations and surveys in search of faster and more practical routes.

The documentary history of these stations, thus, begins about 1858 with these actions on the part of the federal government. In that year, Major George Chorpennig secured the government contract to carry the mail from Placerville to Salt Lake City, where it would connect with the regular over-land mail for St. Joseph, Missouri.² Major Chorpennig's line at first followed the old emigrant route across Nevada through Genoa, Carson City, Dayton and Ragtown, then across the Forty-Mile Desert to the Humboldt, which it followed east for some distance before turning southeast on the Hastings Cut-off for Salt Lake City.³ In the winter of 1858-59, however, Chorpennig switched his wagons to a new route, which cut fifty miles from the distance through the use of Egan's Pass (named for its discoverer, Howard Egan) south of the Goose Creek Mountains. This change was greeted with joy by the Territorial Enterprise, where it was noted on January 1, 1859 that Mr. George Carter had made the pioneer trip with the Salt Lake mail over the new route the previous month and since that time "the Salt Lake Mail has arrived here with the utmost regularity and promptitude." Between the sink of the Humboldt and the Carson Valley only five stations -- Desert, Ragtown, Smith's, Miller's, and Eagle Valley -- were listed on this route in March, but by mid-May 1859, according to Chorpennig's later testimony, coaches were running on the new road all the way to the Carson River settlements with stations every twenty miles.⁴

The search for a still shorter route continued, however, for that same spring Capt. J. H. Simpson of the U.S. Corps of Topographical Engineers was sent from Camp Floyd, Utah Territory, to locate a more direct route to the Carson Valley. Simpson managed to reduce the distance 150 miles by cutting across the central Nevada desert rather than following the Humboldt

River route and during the course of his explorations, established campsites at Cold Springs and Sand Springs, the first documented evidence of human settlements at these sites.⁵

Chorpenning, realizing the advantages of Simpson's discoveries, again changed routes, and the Territorial Enterprise reported on December 31, 1859 that Chorpenning's agents were constructing new stations along the route. This, it has been pointed out, was quite probably the origin of the Cold Springs Station and possibly of Sand Springs as well.⁶

The origin of the Rock Creek station is more difficult to trace, in large part because of the name problem. Who built the buildings and when? Were they built after the original Cold Springs site was abandoned, or did they operate contemporaneously? The documentary record provides no conclusive answers but suggests at least two alternatives, neither of which supports its use as a Pony Express station, however.

When the Pony Express began operations in the spring of 1860, the company supplemented the mail stations with additional stations across Nevada. Cold Springs and Sand Springs are mentioned as stations early in 1860, but from Sir Richard Burton's description of the station he visited on October 15, 1860, it seems evident he is describing the original Cold Springs site:

The station was a wretched place, half built and wholly unroofed;...Our animals, however, found good water in a rivulet from the neighboring hills, and a promise of a plentiful feed on the morrow,...⁷

After Cold Springs, the next stop on Burton's and the Pony's route was Sand Springs station, which received no more favorable treatment from Burton's pen, being described as "roofless and chairless, filthy and squalid, with a smoky fire in one corner, impure floor; the walls open to every wind, and

the interior full of dust."⁸

In July 1861, the Overland Mail was transferred from Butterfield's southern route, which passed through northern Texas, to the central, or Simpson's route because of the Civil War. The company utilized many of the same stations as the Pony Express since these were already established in convenient locations with supplies of water but may also have built others of its own, a possibility suggested by the remark of the Territorial Enterprise on July 20 that although the first Overland Mail stage had arrived, the company did not as yet have its stations fully arranged. That Sand Springs and Cold Springs stations continued to be utilized, however, is indicated by the official listing of the original stations on the Central route, which included Reese River, Cold Springs, Middle Gate, Sand Springs, Sand Hill, Carson Sink, Desert Station and Fort Churchill.⁹

At the same time that the Civil War forced the removal of the Overland Mail to a route through Nevada, another major step in the improvement of communications between East and West was being undertaken as the Overland Telegraph Company raised its lines eastward across the territory. On the same day, July 20, 1861, that it reported the arrival of the first Overland Mail stage, the Enterprise also noted the progress of the telegraph line to a point 100 miles past Fort Churchill. The completion of the line to Salt Lake City in October, two months earlier than anticipated, doomed the Pony Express, but some of the Pony's stations, including Sand Springs, served as telegraph, as well as stage stations.¹⁰

Although there is no conclusive documentary evidence to support it, there is a possibility that a station was constructed at the Rock Creek site in the summer or fall of 1861 by the Overland Mail or the Overland

Telegraph Company or both. Another and perhaps more likely possibility, and one for which some documentary evidence can be produced, is that the station at Rock Creek was built during the latter half of 1862 or the spring of 1863 as the result of the Reese River mining developments.

Silver was discovered in the Reese River district in May 1862, and by the spring of 1863, the area was experiencing a boom not unlike that of the Comstock in 1860. Travellers between Virginia City and Austin reported the roads clogged with wagons; at least five companies were running passenger coaches between Virginia City and Austin. At this time a new road began to be widely used in reaching the Reese River district. This road branched off the old Overland route at Jacobsville turning north through Mount Airy and New Pass then south to Edward's Creek and Cold Springs station before returning to the old route near Middle Gate.¹¹

This was the route followed in 1863 by a party of emigrants, including Flora Isabella Bender, who kept a daily record of the journey. On July 28 their route took them from Jacobsville to Smith River; the following day they reached Edward's Creek before noon and spent the remainder of the day. For Thursday, July 30, her entry reads:

Started out early this morning and passed several nice ranches before getting out on the desert. No water till we got to Cold Springs where we nooned--poor water. Proceeded on and arrived at dark at West Gate, 28 miles from Edward's...¹²

Bender's remark about the quality of the water at Cold Springs, when compared with Burton, who found the water one of the station's few redeeming qualities, certainly seems to support the theory that by the summer of 1863, "Cold Springs" was being used to refer to the Rock Creek site.

Bender's journal also indicates that, at this time at least, Sand Springs was still in use as a station, because on July 31 she noted:

...Stopped at noon, watered and fed, and about five o'clock got to Sand Springs--salty water and no grass. Hay 5 cents per pound....A family live at the station....We were invited in to dance this eve, but would not go.¹³

By the fall of 1863, however, Sand Springs, although not abandoned, had been bypassed by the Overland in favor of a more northerly route through the new Mountain Wells and Stillwater mining districts.¹⁴

Even though it was bypassed by the Overland and no longer served as a mail station, Sand Springs continued to be occupied probably at least through the 1870's, primarily because of its function as a telegraph station, its location between the Comstock and Austin-Reese River population centers, and the nearby salt deposits. Furthermore, as the freight and passenger traffic to and from the Austin area increased, enterprising businessmen constructed toll roads to help handle the flow. By 1868 five such roads existed, and Sand Springs was a stop on at least one, as indicated by the 1865 Lyon County Surveyor's report:

I have recently made a survey for a road down the Carson River to Buckland's one mile below Fort Churchill, where a substantial bridge has been built, thence on to Sand Springs, in Churchill County, connecting at that place with another company, that takes it on to Austin, Lander County.¹⁵

A large salt flat was discovered near Sand Springs in the winter of 1864.¹⁶ In a very short time, the mining of this salt for the mills of the Comstock and the Reese River District became a very large and lucrative business. Ownership of the flat changed a number of times, eventually in 1870, like so many other Nevada properties, falling into the hands of the Bank of California. In the summer of 1872, after laying idle for two years, the mines were leased by the firm of Langtry and Putnum and returned to operation. Depression struck the Nevada mining industry in the 1880's,

however, and with the stamp mills no longer requiring large amounts of salt for their operation, the cost of mining and transporting Sand Springs salt became prohibitive and the mines were once again closed.¹⁷

Cold Springs (probably at this point in time the Rock Creek site) was retained as an Overland Mail station through 1866 and quite possibly until the Overland was replaced by the railroad in the spring of 1869. An advertisement in the Territorial Enterprise on June 3, 1866 for hay for the Overland Mail Line between Virginia City and Austin includes Cold Springs, Edward's Creek, New Pass, and Mount Airy. In addition, Cold Springs was a station on the Railroad Stage Line, which was contracted to carry the mail from Virginia City to Boise City, Idaho Territory by way of Unionville, Star City and Dun Glen.¹⁸

Freight and passenger traffic along the roads between Virginia City and Austin declined drastically with the advent of the railroad, which had reached the Big Bend of the Truckee (now the site of Wadsworth) by the spring of 1868 and Battle Mountain by the fall. Local traffic continued, of course, but Austin, the Reese River district and many, if not most of the new towns of central Nevada were supplied from the railhead at Battle Mountain. Also, when the transcontinental railroad connection was complete, the telegraph line was moved parallel to its route for easier protection.

Although the documentary evidence is both scanty and inconclusive, both the Sand Springs and the Rock Creek sites were probably abandoned sometime during the period between 1870 and 1910.¹⁹ Elements in the oral history record indicate that Rock Creek station was definitely abandoned before 1910. The Sand Springs area experienced a brief mining boom between 1907 and 1911, but there is no documentary evidence of any similar activity in the Rock Creek area.

ORAL HISTORY²⁰

Mr. Lattin's statements regarding the Rock Creek site seem to support a pre-1900 date for its abandonment, since the station was unoccupied and beginning to seriously deteriorate at the time of his first visit about 1907. Across the road to the northeast about one half mile, however, a man Mr. Lattin remembers only as "Bull" had a cabin and a store, where he kept a few bales of hay and would sell meals to travellers. This station, apparently known alternately as Bull's Place or Cold Springs, was built, according to Lattin, at approximately the same time as the Rock Creek station and not abandoned until about 1925.

He also remembers being told that the northern ruins were at one time a telegraph repair station with an operator and a permanent repair crew. The old Overland Road, he told me, turned about three or four miles south of the ruins and ran through the George Williams ranch to Eastgate. As he remembers it, the Rock Creek site was always referred to as the Pony or the Overland or Cold Springs; he cannot recall ever having heard of the original Cold Springs Pony Express station being referred to as such. This may mean that in the years after the Pony Express was discontinued and the Cold Springs station was no longer active that the name Pony station began to be applied inaccurately to the Rock Creek station.

Both Mr. Lattin and Mr. Barkley recall that the Sand Springs site was always referred to as the Pony station. When Mr. Lattin first saw the station about 1907, it was clearly visible, but by 1927, according to Mr. Barkley, the entire station excepting one corner was buried in sand. About 1908 or 1909, states Lattin, two prospectors built a lean-to at the station, repaired the corrals for their two oxen and two burros and transported ore

from a claim, the location of which they never disclosed, to the well at Sand Springs. This seems to be supported by Mr. Barkley's discovery in 1927 of an old arasta and a large pile of tailings at the site, but it is weakened by newspaper and journal reports of the time, which seem to indicate that the station was in use as a freight and passenger station at this late date.

The problem, however, as in the case of Cold Springs, may lie in the application of one name to several different locations in the same general vicinity. In the case of Fort Churchill, for instance, the name was used during the fort's active period to mean not only the fort but any of a number of small ranches surrounding it. During the 1880's it also came to include the Fort Churchill station on the Carson and Colorado Railroad, which was located nearly two miles south of the actual fort. Since their contemporaries were presumably aware of these subtle differences, journalists and others who left written records felt no need to make the distinction clear.

Mr. Barkley also noted that until the late 1920's, the road across Four-Mile Flat was a summer road only, the all-weather or wet-weather road by-passed the flat and ran by the old Pony station then cut back in to Sand Springs. Thus, early in the 20th century, the station was not entirely isolated from the main road as it is today.

NOTES

¹Donald L. Hardesty, The Archaeology of Cold Springs Station (Carson City, Nevada: Bureau of Land Management, Carson District Office 1976).

²Myron Angel, ed., History of Nevada, with Illustrations and Biographical Sketches of its Prominent Men and Pioneers (Oakland, California: Thompson & West, 1881; reprint ed., Berkeley, California: Howell-North, 1958), p. 104.

³Ibid., p. 103.

⁴Territorial Enterprise (Virginia City, Nevada), March 26, 1859; The Case of George Chorpennig vs The United States: A Brief History of the Facts by the Claimant, with Arguments of Counsel (Washington, D.C.: McGill & Witherow, 1874), pp. 23-4.

⁵Donald L. Hardesty, The Archaeology of Sand Springs Express Station (Carson City, Nevada: Bureau of Land Management, Carson District Office 1977).

⁶Ibid., pp. 84-5.

⁷Richard Burton, The City of the Saints and Over the Rocky Mountains to California (New York: A. A. Knopf, 1862), p. 487.

⁸Ibid., p. 8.

⁹United States Senate, Executive Documents, 46th Congress, Session 3, vol. 1, no. 21, pp. 7-8.

¹⁰Hardesty, Sand Springs, pp. 88-9.

¹¹The Washoe Times (Washoe City, Nevada), January 24, 1863, provides a list of the "stopping places" along the road to Reese River and the distances between them, including Middle Gate, Cold Springs Station, Edwards Creek and New Pass.

¹²Flora Isabella Bender, "Memoranda of a Journey Across the Plains, from Bell Creek, Washington Co., Neb. to Virginia City, Nev., Terr. May 7 to August 4, 1863," Nevada Historical Society Quarterly 1 (July 1958):171.

¹³Ibid.

¹⁴Hardesty, Sand Springs, p. 87.

¹⁵Appendix to Senate Journal 1866, Report of the Lyon County Surveyor, p. 56. The Lyon County Sentinel (Dayton, Nevada) on March 24, 1866 reported the road open to traffic and gave stations and distances.

¹⁶Reese River Reveille (Austin, Nevada) January 26, 1864, quoting from the Territorial Enterprise.

¹⁷Appendix to the Senate Journal 1873, Report of the State Minerologist for 1871-2; Appendix to the Journals of the Senate and Assembly 1885, Surveyor-General's Report for 1883-4, p. 14.

¹⁸Territorial Enterprise, September 18, 1866.

¹⁹For a discussion of Sand Springs, see Hardesty, Sand Springs, pp. 89-90.

²⁰I am very grateful to Mr. Mark Lattin and Mr. Robert Barkley, who have been residents of Churchill County since 1907 and 1927, respectively, and without whose generous assistance, this section would have been non-existent.

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Documentary sources for the study of the history of the Rock Creek-Cold Springs-Sand Springs area are located primarily in four depositories: the Nevada Historical Society in Reno; Getchell Library on the University of Nevada, Reno campus; the Bureau of Land Management Reno State Office; and the Utah State Historical Society in Salt Lake City. Probably the most valuable sources are Nevada newspapers of the period, which can be found on microfilm in both the Nevada Historical Society and Getchell Library, although, unfortunately, many issues for the period 1859-1870 have not survived. Another useful source is the manuscript collections of both the Nevada Historical Society and the Utah State Historical Society. The holdings of the Government Documents Department of Getchell Library include the annual reports of the Postmaster General of the United States, which can provide important information on government-subsidized mail routes, and annual reports of Nevada state officials, such as the Surveyor-General. Government survey maps of the area drawn as early as 1868 are available in the Reno Bureau of Land Management Office, while Getchell Library's Special Collections Department has an extensive collection of 19th century maps of Nevada. The following is a listing of the major sources consulted in the preparation of this report.

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THE ARCHITECTURAL RECORD

The design and construction of all the buildings at Rock Creek are quite similar to nearby Cold Springs and Sand Springs express stations (v. Hardesty 1976, 1977). Walls are built of rhyolitic boulders apparently selected from the debris flowing from the Desatoyas onto the valley floor. The modal size of the boulders is about 2 feet long, 1 foot wide, and 1 foot thick but there is quite a bit of variation. None of the boulders is obviously shaped artificially, and all are dry set, without mortar. Two courses of boulders give a modal wall thickness of 2.5 feet; however, a few rooms in some of the buildings have 4 foot thick walls made up of 4 courses. The standing walls are low relative to Cold Springs and Sand Springs, averaging only about 3 feet in height (Figures 3-5, 7, 9-10. Plates 1, 2). On the other hand, a few of the rooms have much higher walls, comparable to those of the other stations, and suggest their use as living areas for the occupants. The floor plan of the Rock Creek telegraph station is generally similar to those of Cold Springs and Sand Springs -- rectangular with a width of 39 feet and a length of 109 feet (Figure 8). Interior space is divided into a series of rooms by stone walls, some of which are quite high but others of which are so low as to suggest some type of foundation for walls made of another material. A similar division of interior space is found at the Rock Creek stage station, but the floor plans of the buildings there are quite different (Figures 2, 6). Both are trapezoids with very irregular angles. Whether or not the unusual shape was intentional is unknown but it is a deviation from the more symmetrical rectangular plan of other documented stage stations in the West.



PLATE 1. ROCK CREEK TELEGRAPH STATION, ROOM 4



PLATE 2. ROCK CREEK STAGE STATION, BUILDING 1, ROOM 5

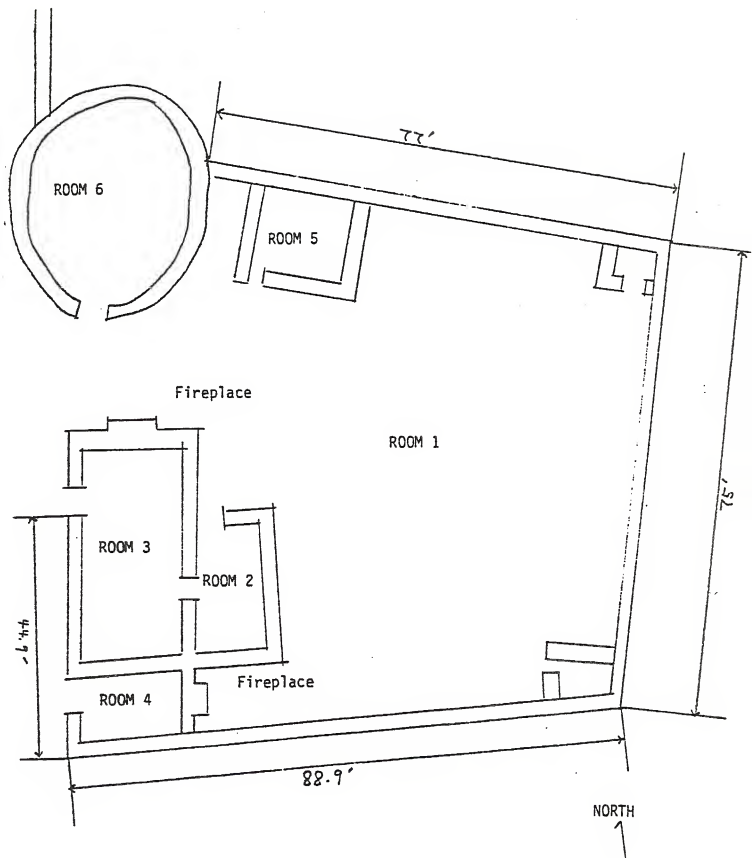


FIGURE 2. ROCK CREEK STAGE STATION, BUILDING 1 FLOOR PLAN

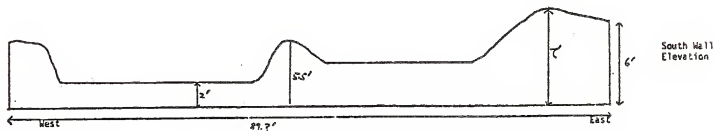
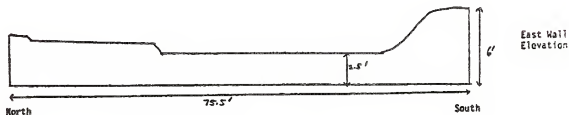
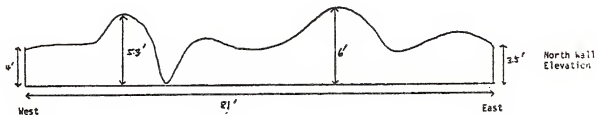
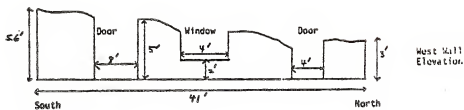


FIGURE 3. ROCK CREEK STAGE STATION, BUILDING 1 EXTERIOR WALL ELEVATIONS

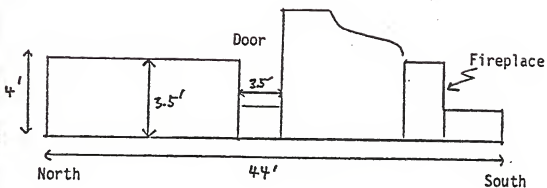
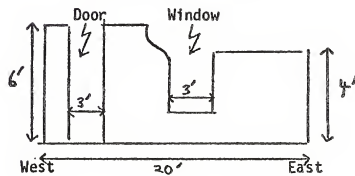
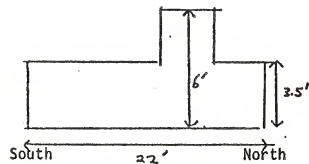


FIGURE 4. ROCK CREEK STAGE STATION, BUILDING 1
INTERIOR WALL DIVIDING ROOMS 3 AND 4

ROOM 5
South Wall Elevation



ROOM 2
East Wall Elevation



ROCK CREEK STAGE STATION BUILDING 1
ROOM ELEVATIONS

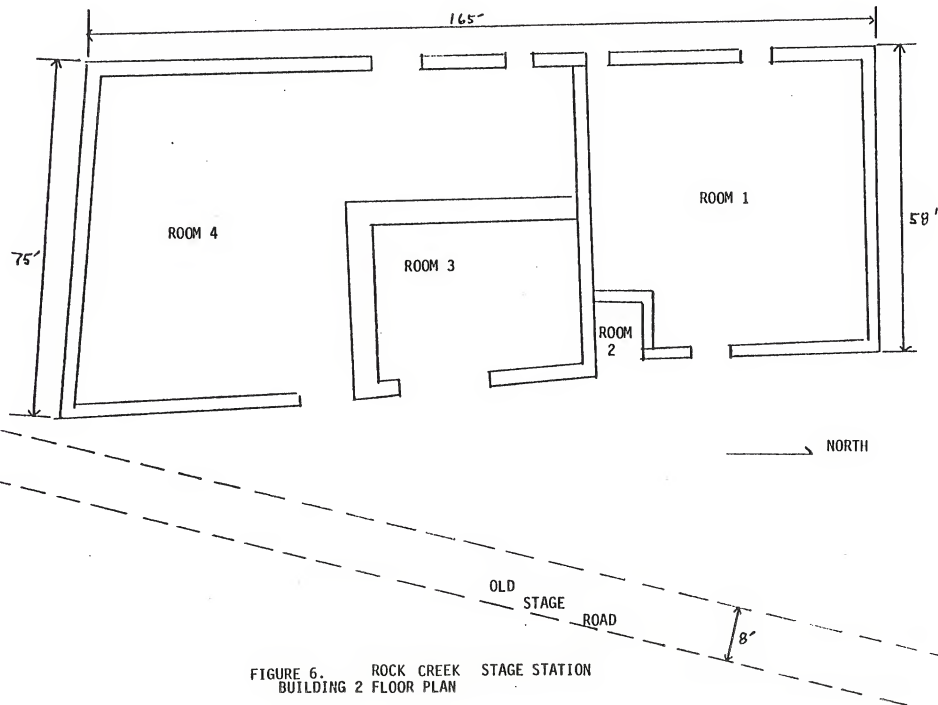


FIGURE 6. ROCK CREEK STAGE STATION
BUILDING 2 FLOOR PLAN

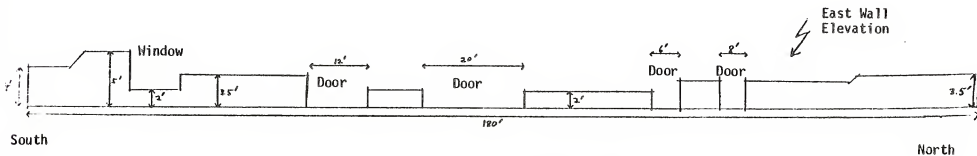
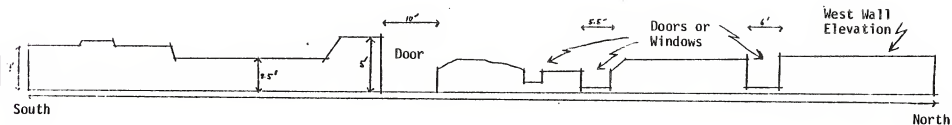
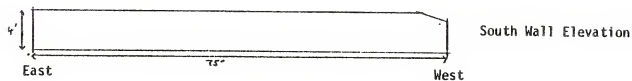
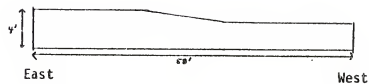


FIGURE 7. ROCK CREEK STAGE STATION
BUILDING 2 WALL ELEVATIONS

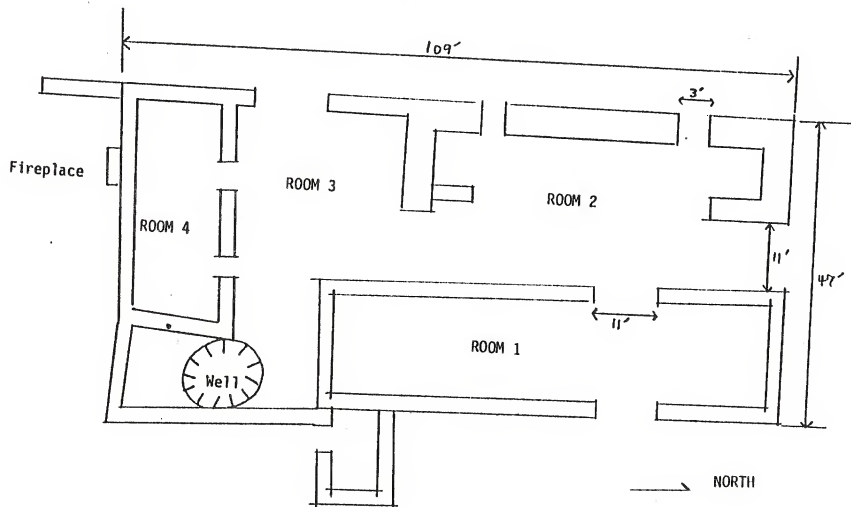


FIGURE 8. ROCK CREEK TELEGRAPH STATION
FLOOR PLAN

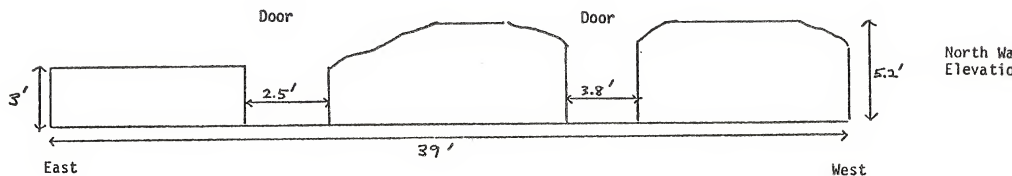
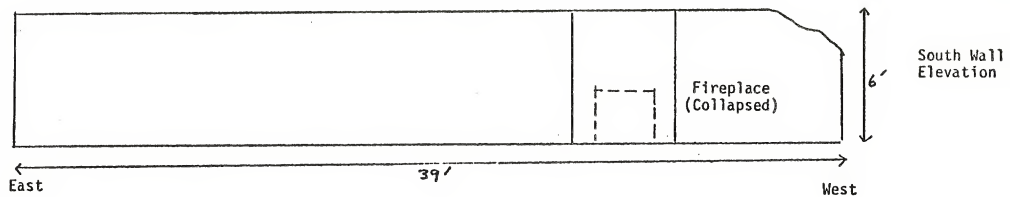


FIGURE 9. ROCK CREEK TELEGRAPH STATION
ROOM 4 ELEVATIONS

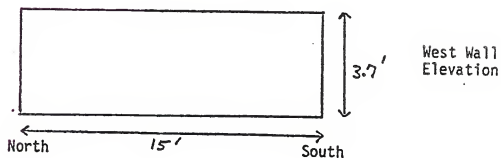
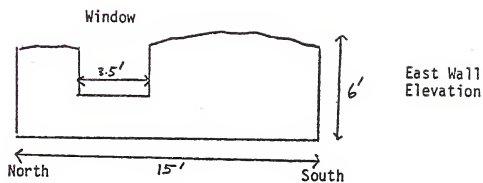


FIGURE 10. . ROCK CREEK TELEGRAPH STATION
ROOM 4 ELEVATIONS (CONTINUED)

THE ARCHAEOLOGICAL RECORD

The documentary/oral history approach turned out to be relatively ineffective as a means of achieving Goal 1. Consequently, the second part of the strategy, using archaeological methods, gained importance. The archaeological record is an independent source of data about human history that cannot only be used to enrich written documents but can also be used in verification. Unfortunately, unlike written documents, the archaeological record is destroyed by the very means by which it is studied. The artifacts remain but their context, their physical relationship to each other, is removed by excavation. For this reason, archaeological records must be treated as scarce resources and excavated only when alternative methods of data collection are not feasible. The Rock Creek sites were excavated only to determine their stratigraphic integrity and to estimate the depth of deposits. Surface collection was the major thrust of the methodology used, not only because it is less destructive than excavation but also because it achieves Goal 4.

METHODS OF DATA RECOVERY

The archaeological record of the Rock Creek sites was studied in three ways. Surface collection was used to acquire a sample of artifacts sufficiently large to recognize artifact patterns within the site. The sample was taken within the buildings and on their perimeters. A transect survey of the area between the sites and in their general vicinity was undertaken to identify other loci of human activity. Finally, a series of small test pits were excavated in order to determine the depth of the archaeological deposits and the extent to which vandalism had disturbed the deposits.

Surface Collection

All artifacts inside the buildings and within a zone extending 10 meters out from the walls were collected from the surface. Nevertheless, it is to be expected that very small and soil-colored artifacts are not as likely to be collected as larger, more contrasting artifacts. The collection inside the buildings was done by room, subdivided into quarters, alcoves, and wings, if appropriate. Outside the buildings, collection was done by 10 meter square plots. Figures 11-13 illustrate the collection plots for each of the buildings at Rock Creek.

Transect Survey

A series of 3-meter wide transects was surveyed within a 1/2 mile radius of the two Rock Creek sites. No collecting was done but artifact concentrations and structures were mapped. The total area covered between the two sites was 100 percent, while 50 percent of the remaining area was surveyed. Selection of the transects in the 50 percent area was based upon a systematic random method. The area was divided into a set of 3-meter wide zones running north-south and extending from the north-south walls of the site out 1/2 mile, numbered from 0 to n. Then the first zone (transect) was selected by using a table of random numbers. Every other transect after the 1st was then surveyed, giving a 50 percent sample. When an "activity locus" was located, the vicinity was also surveyed for associated artifacts and structures.

The survey yielded little of importance. About halfway between the stage station and the telegraph station is what looks to be a fairly modern surface scatter associated with an 82 feet long, 12 feet wide, and 3 feet deep cut into the ground. The cut is oriented 48 degrees west of

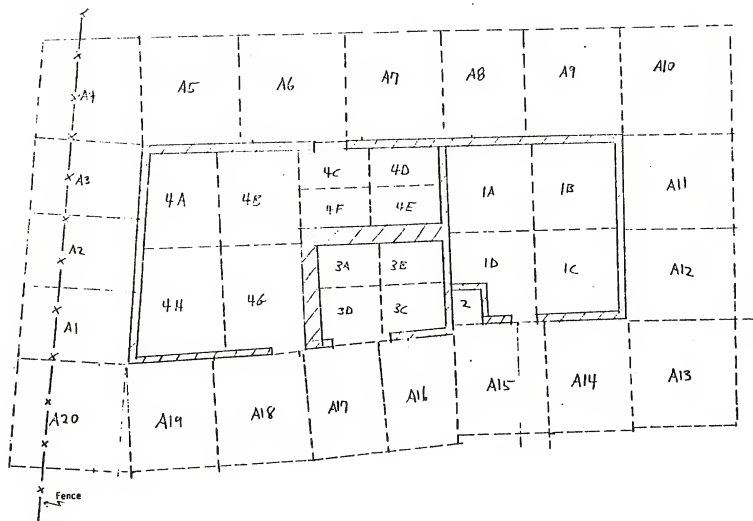


FIGURE 12. SURFACE COLLECTION UNITS AT ROCK CREEK STAGE STATION, BUILDING 2

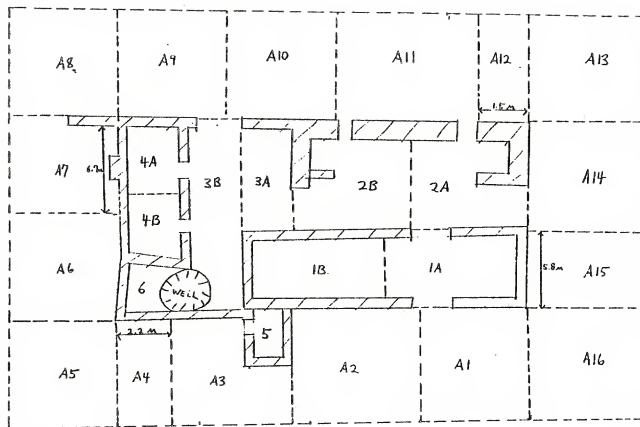


FIGURE 13. SURFACE COLLECTION UNITS AT ROCK CREEK TELEGRAPH STATION

true north, slopes to the ground surface at both ends, and is divided into 3 approximately equal "rooms" by dirt partitions. About 8 feet north of the central room is a 10 feet diameter scatter of wooden planks lying adjacent to a small (3 feet diameter) charcoal scatter. A few steel pipe fragments are in the vicinity, along with a "Havoline" motor oil quart can. Secondly, the remnants of 2 square posts are situated approximately 200 and 400 feet, respectively, from the northern end of the fence surrounding the stage station. Both are 6 inches square, stand about 1 foot high, and form a line 32 degrees east of true north. No other posts could be located on this line, which runs between the eastern wall of building 2 at the stage station and the western wall of the telegraph station. A telegraph line is suggested but no direct support for this conclusion could be found. A third "activity locus" was located about 100 feet from the square post closest to the stage station on a line 65 degrees west of true north. It consists of a surface scatter of modern beer cans on a promontory overlooking the north branch of Pony Canyon Creek and appears to be no more than a small refuse dump. Finally, the old road running past both stations, along with a stone wall on its east side, was located. It is about 6 feet wide and runs approximately 32 degrees east of true north, closely following the hypothetical telegraph line, and turns to 40 degrees east of true north after going past the west wall of the telegraph station. The road runs between the 2 buildings at Rock Creek stage station. Figure 14 shows the position of the road on a 1915 surveyor's map. (Sites are marked as Pony Express stables.)

A very light scatter of glass fragments and tin cans is continuous between the stations and outward for about .1 mile in any direction, where

it disappears. The scatter is much denser within 100 feet of the buildings, especially along the west wall of the telegraph station where it reaches a density of 5-10 artifacts per square foot. That part of the zone within 10 meters of the wall was collected, as outlined above. The only structure in the refuse zone is a low stone wall extending out from the south wall of the telegraph station and the north wall of building 1 at the stage station and following the east side of the old road. Unfortunately, the purpose of the wall could not be identified.

Test Excavation and Stratigraphy

Strata cuts were made in each room of the 3 buildings at Rock Creek. They were taken, whenever possible, in areas undisturbed by vandalism. Each cut penetrates the artifact-bearing deposits to the underlying sterile strata and, with one exception, is a rectangular column with sides 40 centimeters and 30 centimeters. The exception is a one-meter square cut in Room 4 of the telegraph station. Larger cuts were considered unnecessary because of the shallowness of the archaeological deposits, nowhere exceeding 30 centimeters in depth, and because large cuts are detrimental to the deposits that remain undisturbed.

Rock Creek Stage Station, Building 1. Strata cuts were made in Rooms 1, 2, 3, 5, and 6. Room 4 was not tested because of partially collapsed walls that covered the entire floor with boulders. In addition neither of the very small alcoves in the northeast and southeast corners of the building was tested. The archaeological deposits throughout have been severely vandalized by bottle collectors, marked by spoil piles both within and outside the building and by partially filled depressions. Consequently, mixing of strata was common. Nevertheless, enough undisturbed remnants

were located to identify a stratigraphic sequence similar to that of nearby Cold Springs Pony Express Station (v. Hardesty 1976:7-20). Loose, aeolian loamy sand covers the building floor to a depth of around 10 centimeters. It is light brownish gray (Munsell notation 2.5Y6/2 dry) and contains artifacts only at its contact with an underlying gravelly deposit or when it has been "churned up" by later disturbances, such as people walking over the floor. The primary artifact-bearing stratum underlies the top stratum and is 5 to 10 centimeters thick. Light reddish brown (Munsell notation 5YR6/3 dry) in color, the sediment is a slightly compact loamy sand with a high gravel content. It was impossible to determine from the test whether the artifacts were generally disturbed throughout the deposit or were restricted to the contact surface with the overlying stratum. Beneath the gravelly, water-deposited layer is a sterile, compact silty sand that is apparently part of the alluvial fan flowing into the valley floor from the Desatoyas. It is very pale brown (Munsell notation 10YR8/3 dry) with white streaks throughout. The only significant exception to this generalized stratigraphic sequence is the occurrence of a deep fibrous deposit between the surface aeolian stratum and the gravelly sediment in Room 6. Colored light brown (Munsell notation 7.5YR6/4 dry), the deposit is layered with thin sheets and is identical to the sediment in Room 3 at Cold Springs Pony Express station that was identified as manure (Hardesty 1976:16, 51). The room was apparently used as a corral. Stratigraphic details follow.

Room 1. A strata cut was made near the juncture between the main part of the room and the northern wing. Stratum 1 is a 10 centimeter thick deposit of sand at the ground surface. The sediment is aeolian in origin

and light brownish gray in color. A thin (5 centimeter thick) light reddish brown loamy sand underlies the top deposit. It is gravelly and artifact-bearing, although the artifacts may in fact lie on top of the stratum. Stratum 3 is encountered at a depth of about 15 centimeters. Apparently part of an underlying alluvial fan, the stratum is made up of a very pale brown silty sand.

Room 2. No part of this room has been left undisturbed, except possibly the floor under the collapsed walls. A strata cut near the center of the room revealed a mixed aeolian sand and gravelly loamy sand to a depth of 20 centimeters. An underlying stratum was a mixture of gravelly loamy sand and silty sand, extending beyond a depth of 40 centimeters. It is possible that the stratigraphic disturbance is partly caused by extensive sagebrush growth in the room but bottle or other relic collectors have left large spoil piles.

Room 3. A strata cut was made near the center of the room. There is no obvious evidence of disturbance but some mixing of deposits is probable. Stratum 1 is a 10 centimeter thick aeolian deposit of light brownish gray sand. An artifact-bearing layer follows, light reddish brown in color and dominated by a loamy sand with a high gravel content. Stratum 2 is 8-12 centimeters thick and is underlain by the very pale brown silty sand found elsewhere in the building.

Room 5. The strata test is situated just inside the doorway to avoid obvious disturbance in the rest of the room. A very thin layer of loose, aeolian sand is spread over the floor surface but rapidly changes to a 35 centimeter thick deposit of light reddish brown loamy sand with a low gravel content. The stratum contains some artifacts and charcoal but at low density. Stratum 3 is the underlying very pale brown silty sand.

Room 6. A strata cut made between the doorway and the center of the room strongly suggests a corral. A very thin aeolian deposit of light brownish gray sand on the surface gives way to a 10 centimeter thick layer of fibrous, light brown organic material. Beneath this "manure" stratum lies a 10-12 centimeter thick deposit of light reddish brown loamy sand with a high gravel content. Finally, at a depth of about 25 centimeters a very pale brown silty sand is encountered. Artifacts are sparse but occur in the fibrous and the gravelly strata. Most of Room 6 has been badly disturbed by bottle collectors; large spoil piles occur just outside the walls.

Rock Creek Stage Station, Building 2. Strata cuts were made in Rooms 1, 3, and 4. Room 2 was not tested because of partially collapsed walls covering the floor. The general stratigraphic sequence is similar to that of Building 1 but is very poorly defined in Rooms 3 and 4. A thin light brownish gray loamy sand covers the ground surface. Within a few centimeters a dense gravelly loamy sand is encountered with most of the characteristics of the artifact-bearing stratum in Building 1; however, artifacts are extremely sparse and are mostly restricted to the top stratum. The gravel stratum is almost impenetrable in both rooms. Room 1 is stratigraphically distinct and is similar to Room 6 in Building 1.

Room 1. The strata cut in this large room was made close to the center of the room and shows a "corral" type stratigraphy. Stratum 1 is a shallow top deposit of light brownish gray aeolian sand. It is underlain by a 15 centimeter thick light brown fibrous layer, designated stratum 2. Stratum 3 is a gravelly light reddish brown loamy sand, 7 centimeters thick, that underlies the manure. Finally, at a depth of about 25 centimeters, a sterile very pale brown silty sand is encountered. Artifacts from the sequence are restricted to strata 1 and 2.

Room 3. The strata cut in this room was made in the center toward the northern end. Stratigraphy is poorly defined but includes a light brownish gray aeolian sand on top. The density of gravel in the stratum rapidly increases until at a depth of 7-8 centimeters the deposit is almost impenetrable. Excavation to a depth of 30 centimeters did not encounter the characteristic very pale brown silty sand found in Building 1. This part of Building 2 seems to be constructed upon a gravel bar. Horseshoe nails and charcoal recovered by the excavation suggest that Room 3 was used for horseshoeing/blacksmithing.

Room 4. A strata cut into the south end of Room 4 demonstrated a stratigraphic sequence almost identical to that of Room 3, with the two strata somewhat better defined. The top 10 centimeters are light brownish gray sand. A rather abrupt shift to a dense gravelly layer occurs at this point, with little change in color. As in Room 3, the excavation did not penetrate beyond the gravel. No artifacts were recovered.

Rock Creek Telegraph Station. Stratigraphic tests were conducted in all 4 rooms. The general stratigraphic sequence in the telegraph station is similar to that in the stage station. On top is a thin aeolian deposit of sand, followed by a 10 to 20 centimeter thick layer of artifact-bearing gravelly, loamy sand. Beneath this is a silty sand underlying the entire area. There is, however, quite a bit of difference between Rooms 1 and 2 and Rooms 3 and 4.

Room 1. A strata cut was made near the south end of the room. A 5 centimeter thick aeolian deposit of light brownish gray sand covers the surface and is designated stratum 1. Beneath this is stratum 2, a very pale brown silty sand. The gravelly, artifact-bearing stratum found elsewhere in the Rock Creek sites is completely absent here.

Room 2. Stratigraphic tests were conducted at the north and the south end of the room. The stratigraphic sequence in each test is identical to the one in Room 1.

Room 3. Two strata cuts were made in Room 3, one at the east end near the well and the other at the west end near the outside entrance. The topmost stratum is a 5 centimeter thick aeolian deposit of light brownish gray loamy sand. Stratum 2 is a 15 centimeter thick layer of light reddish brown loamy sand with a high gravel content. It is artifact-bearing and overlies stratum 3, the very pale brown silty sand deposit that occurs throughout the area.

Room 4. Two strata cuts, one at each end of the room, and a one meter square test unit were made in Room 4. The stratigraphic sequence revealed is exactly the same as that in Room 3, with the exception that stratum 1 is 15 centimeters thick and stratum 2 is 20 centimeters thick.

ARTIFACT PATTERNS

The artifacts collected from the archaeological records at the Rock Creek sites were studied to determine use, dates, and patterns. Patterns were, in turn, used to infer human activities. The first step in artifact analysis is classification and the method used for the Rock Creek collection is identical to that of the nearby Fort Churchill collection (Hardesty 1978). First of all, artifacts are grouped into types by the presence of one or a few attributes that reflect differences in use, time, or style. A Drake's plantation bitters bottle, for example, is defined as a type in the Fort Churchill collection (Hardesty 1978:95), as is an ironstone bowl with a white glaze and an embossed "leaf" design around the rim (Hardesty 1978:124). Types are, in turn, grouped into

wares. A ware is made up of several types that hold a few attributes in common, as, for example, in the case of several decorated and undecorated types of ceramics being grouped into ironstone ware because they are all made with the same kind of paste and fired at about the same temperature. Wares may be grouped into materials (e.g., South 1977:92 ff) but this category is not often used in the Rock Creek classification. One exception is the combining of ironstone ware and a few other wares into stoneware on the basis of manufacturing technique. The class, however, is an important category for our purposes and is defined by a general use held in common by types, wares, and/or materials. Thus, buttons, shoes, door hardware, tobacco pipes, ammunition, and kitchen dishes are artifact classes comprising a variety of typological differences. The classes defined for the Rock Creek collection are listed in Table 1. Finally, classes are combined into Groups. A group includes those classes that are used in the same human activity, such as construction, clothing, arms and ammunition, food refuse, and so forth. Table 1 also lists the groups defined for the present study. The relative occurrence of artifact classes and groups is then used to recognize distinct artifact patterns that underlie past human behavior, patterns that also reflect the action of natural and human disturbances on the "original" pattern (v. Schiffer 1976). The explanation of artifact patterns is the key to understanding the archaeological record (v. Schiffer 1976; South 1977). Tables 2-4 give the frequencies of artifact classes at the Rock Creek sites.

TABLE 1. ARTIFACT CLASSES AND GROUPS IN THE ROCK CREEK COLLECTION

<u>Class</u>	<u>Group</u>	<u>Types of Artifacts Included</u>
1. Fasteners	CONSTRUCTION GROUP	nails, screws, tacks, rivets, cotter pins, washers
2. Plate Glass		
3. Beverages	BOTTLE GROUP	wine, champagne, whiskey, ale, soda
4. Medicine or Bitters		bitters
5. Condiments	HOUSEHOLD GROUP	spice, pickle, Worcestershire sauce
6. Kitchen Dishes		Ironstone whiteware, salt-glazed crockery
7. Utensils		
8. Tea kettle		
9. Buttons	CLOTHING GROUP	
10. Shoes		
11. Buckles	PERSONAL GROUP	suspender, belt
12. Adornment		beads
13. Grooming		combs
14. Tobacco pipes		
15. Ammunition	ARMS GROUP	
16. Percussion caps		
17. Animal shoes	TRANSPORT GROUP	horseshoes
18. Tack		harness
19. Buckets	CONTAINER GROUP	
20. Hoops		barrel hoops, crate hoops
21. Pans		
22. Cans	FOOD REFUSE GROUP	hole-in-top, open top
23. Bone		

<u>Class</u>	<u>Group</u>	<u>Types of Artifacts Included</u>
24. Farm tools	TOOL GROUP	
25. Telegraph Equipment	COMMUNICATIONS GROUP	telegraph insulators
26. Metal fragments	UNIDENTIFIED REFUSE GROUP	
27. Leather fragments		
28. Wire fragments	MISCELLANEOUS GROUP	
29. Fish hooks		
30. Coil springs		
31. Stovepipes		

COLLECTION UNIT

Artifact	1A	1B	1C	1D	1E	1F	1G	1H	2	3	4	5	6	A1	A2	A3	A4
Nails, screws	21	53	31	0	1	43	63	3	2	0	0	3	3	1	1	3	46
Window glass	64	0	7	0	0	0	58	1	23	0	0	4	15	0	0	0	180
Bottles	131	107	113	11	21	153	142	9	7	4	0	14	96	30	104	135	177
Cans	18	5	20	0	1	8	19	9	0	0	0	1	5	6	3	16	41
Utensils	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ceramics	150	68	17	0	9	99	93	0	13	2	0	0	4	5	7	32	37
Buttons	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
Buckles	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Shoes	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adornment	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Combs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pipes	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ammunition	1	0	0	0	0	2	0	1	0	0	0	0	0	1	0	0	1
Percussion caps	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Animal shoes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tools	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Bone	7	3	0	0	1	48	4	0	1	15	0	0	0	0	0	11	2
Metal fragments	47	27	24	0	6	55	103	16	4	29	0	59	74	7	8	31	84
Metal strips	2	1	2	0	0	2	8	0	2	0	0	0	0	2	0	8	12
Wire	29	6	21	0	1	25	16	1	1	3	0	0	0	10	1	14	44
Buckets	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	1
Tack	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Barrel Hoops	1	0	1	0	0	1	3	3	1	0	1	0	14	0	4	0	0
Stovepipes	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Teakettle/pot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Rivets	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coil springs	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0
Hooks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cotter pins	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Fish hooks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wire ties	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Metal pan, shallow	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0

TABLE 2. ARTIFACT CLASS FREQUENCIES FROM ROCK CREEK STAGE STATION, BUILDING 1

COLLECTION UNIT

Artifact	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	TOTAL
Nails, Screws	0	176	8	2	1	0	0	0	0	0	2	0	0	463
Window glass	17	101	19	0	0	0	2	0	0	0	0	1	0	492
Bottles	138	318	43	46	23	0	3	34	0	15	54	20	7	1955
Cans	1	11	4	3	0	1	3	0	0	0	13	0	3	191
Utensils	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Ceramics	67	296	22	9	5	0	1	1	0	2	2	8	0	949
Buttons	0	1	0	0	0	0	0	0	0	0	0	0	0	3
Buckles	0	0	0	0	1	0	0	0	0	0	0	0	0	3
Shoes	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Adornment	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Combs	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Pipes	0	2	1	0	0	0	0	0	0	0	0	0	0	4
Ammunition	1	2	1	0	0	0	0	0	0	0	0	2	0	12
Percussion caps	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Animal shoes	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tools	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Bone	2	5	0	0	0	0	0	0	0	0	0	0	0	99
Metal fragments	22	139	13	62	16	0	0	0	1	0	6	2	1	836
Metal strips	0	0	0	0	0	0	0	0	0	0	2	0	0	41
Wire	14	8	0	1	3	0	0	1	1	0	0	2	0	202
Buckets	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Tack	0	1	0	0	1	0	0	0	0	0	0	0	0	3
Barrel hoops	0	3	2	4	0	0	0	0	0	0	0	0	0	38
Stovepipes	0	0	2	0	0	0	0	0	0	0	0	0	0	3
Teakettle/pot	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Rivets	0	3	0	0	0	0	0	0	0	0	0	0	0	4
Coil springs	0	1	0	0	0	0	0	0	0	0	0	0	0	3
Hooks	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Cotter pins	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Fish hooks	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Wire ties	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Metal pan, shallow	0	0	0	0	0	0	0	0	0	0	0	0	0	1
														GRAND TOTAL: 5320

TABLE 2. ARTIFACT CLASS FREQUENCIES FROM ROCK CREEK STAGE STATION, BUILDING 1 (Continued)

	COLLECTION UNIT																
	<u>1A</u>	<u>1B</u>	<u>1C</u>	<u>1D</u>	<u>2</u>	<u>3A</u>	<u>3B</u>	<u>3C</u>	<u>3D</u>	<u>4A</u>	<u>4B</u>	<u>4C-F</u>	<u>4D-E</u>	<u>4G</u>	<u>4H</u>	<u>A1</u>	<u>A2</u>
<u>Artifact</u>																	
Nails, screws	0	0	0	0	0	0	3	20	0	2	0	0	1	0	2	0	0
Window glass	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
Bottles	4	0	20	1	3	6	2	59	8	4	0	8	6	0	12	0	4
Ceramics	0	0	0	0	0	0	2	12	9	2	0	2	1	0	10	0	0
Pipes	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Animal shoes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tools	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bone	0	2	0	0	0	0	0	1	0	0	0	1	0	0	10	0	0
Metal fragments	0	3	4	0	0	0	4	4	7	0	0	21	0	0	0	1	0
Tack	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wire ties	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Barrel hoops	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Metal strips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bucket handles	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wire	6	3	2	4	0	1	2	11	4	1	0	2	5	0	2	2	0
Rivets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barbed wire	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Wire cloth	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cans	2	0	2	0	0	2	0	1	2	1	0	2	3	0	0	0	0

TABLE 3. ARTIFACT CLASS FREQUENCIES FROM ROCK CREEK STAGE STATION, BUILDING 2

COLLECTION UNIT

<u>Artifact</u>	<u>A3</u>	<u>A4</u>	<u>A5</u>	<u>A6</u>	<u>A7</u>	<u>A8</u>	<u>A9</u>	<u>A10</u>	<u>A11</u>	<u>A12</u>	<u>A13</u>	<u>A14</u>	<u>A15</u>	<u>A16</u>	<u>A17</u>
Nails, screws	0	0	0	1	17	0	0	0	0	1	7	0	2	13	4
Window glass	0	0	0	0	42	0	0	0	0	0	0	0	0	0	0
Bottles	2	0	2	1	57	3	1	1	2	19	69	4	54	97	34
Ceramics	0	0	0	0	18	0	0	0	0	8	4	2	2	62	33
Pipes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Animal shoes	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0
Tools	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Bone	0	0	0	0	0	0	0	0	1	0	12	0	0	0	0
Metal fragments	0	0	1	1	26	7	0	0	3	7	6	13	50	8	17
Tack	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Wire ties	0	0	0	0	0	0	4	2	0	0	0	0	0	0	0
Barrel hoops	0	0	0	0	2	1	0	0	0	1	0	0	1	0	1
Metal strips	0	0	0	1	0	0	0	0	0	1	0	0	2	0	0
Bucket handles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wire	0	0	0	1	14	1	1	1	2	3	5	1	5	10	13
Rivets	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Barbed wire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wire cloth	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
cans	1	0	1	3	2	2	2	0	8	7	6	4	12	4	5

TABLE 3. ARTIFACT CLASS FREQUENCIES FROM ROCK CREEK STAGE STATION, BUILDING 2 (continued)

COLLECTION UNIT

<u>Artifact</u>	<u>1A</u>	<u>1B</u>	<u>2A</u>	<u>2B</u>	<u>3A</u>	<u>3B</u>	<u>4A</u>	<u>4B</u>	<u>5</u>	<u>6</u>	<u>A1</u>	<u>A2</u>	<u>A3</u>	<u>A4</u>	<u>A5</u>
Nails	0	0	1	4	0	2	1	0	0	1	1	0	27	15	31
Window glass	0	0	0	2	1	12	0	0	0	0	1	3	4	0	1
Bottles	13	0	15	135	155	164	50	2	11	15	83	14	178	41	146
Cans	6	0	2	2	2	8	5	8	5	0	1	1	0	0	4
Ceramics	0	0	0	0	35	13	0	0	0	5	16	13	12	4	32
Buttons	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Grooming	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Pipes	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Arms	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Tack	0	0	0	1	0	0	0	0	0	0	0	0	33	12	17
Bone	3	0	1	14	2	0	1	0	0	0	0	2	2	0	0
Metal fragments	1	0	3	14	18	16	24	6	155	0	3	5	101	8	34
Wire fragments	3	0	3	1	0	4	0	0	1	1	3	3	19	13	20
Beads	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Telephone insulator	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buckets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hat pin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Metal strips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Rivets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Washers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Eyelet	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Barrel hoop	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0
Crate hoop	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0

TABLE 4. ARTIFACT CLASS FREQUENCIES FROM ROCK CREEK TELEGRAPH STATION (CR-NV-03-1120)

COLLECTION UNIT

<u>Artifact</u>	<u>A6</u>	<u>A7</u>	<u>A8</u>	<u>A9</u>	<u>A10</u>	<u>A11</u>	<u>A12</u>	<u>A13</u>	<u>A14</u>	<u>A15</u>	<u>A16</u>
Nails	33	13	14	6	0	3	2	0	1	1	1
Window glass	7	0	0	0	7	1	0	3	15	1	0
Bottles	455	247	169	172	126	70	38	102	96	47	98
Cans	3	4	2	10	3	2	0	0	3	0	1
Ceramics	87	19	9	19	50	2	0	1	6	1	0
Buttons	1	0	0	0	0	0	0	0	1	0	0
Grooming	0	0	0	0	0	0	0	0	0	0	0
Pipes	0	0	0	0	0	0	0	0	0	0	0
Arms	0	0	0	0	1	0	0	0	0	0	0
Tack	3	1	4	0	0	2	0	0	0	0	1
Bone	3	9	5	0	1	0	4	0	0	0	0
Metal fragments	45	18	26	23	48	12	3	6	0	16	18
Wire fragments	18	4	7	2	5	3	2	4	6	11	8
Beads	4	0	1	0	1	0	0	0	0	0	0
Telephone insulators	0	0	0	2	16	3	0	0	0	0	0
Buckets	0	0	1	1	0	0	0	2	0	0	0
Hat pin	0	0	0	0	1	0	0	0	0	0	0
Metal strips	0	0	1	0	0	0	0	0	0	0	0
Rivets	0	0	0	0	0	0	0	0	0	0	0
Washers	0	0	0	1	0	0	0	0	0	0	0
Eyelet	0	0	0	0	0	0	0	0	0	0	0
Barrel hoop	1	0	0	0	0	0	0	1	0	0	0
Crate hoop	0	0	0	0	0	0	0	0	0	0	0

TABLE 4. ARTIFACT CLASS FREQUENCIES FROM ROCK CREEK TELEGRAPH STATION (CR-NV-03-1120) (continued)

One way of detecting artifact patterns for inter-site comparison purposes is the use of cumulative percentage curves, or ogives (v. Johnson 1968:25 ff). Ogives are graphs constructed by cumulatively adding the percentages of artifact classes in a collection and show which classes are responsible for similarities and differences among collections. Figure 15 gives the ogives for the Rock Creek sites and those from nearby Sand Springs station, Cold Springs station, and the guardhouse at Fort Churchill. Two distinct patterns emerge. All of the Rock Creek sites and the Fort Churchill building have a pattern dominated by a high percentage of bottles and a low percentage of bone. By contrast, the two pony express stations have an artifact pattern with low percentages of bottles and a high percentage of bone. The most obvious explanation is that bone refuse was allowed to accumulate in and around the pony express stations and not the others. In fact if bone is removed from the Sand Springs and Cold Springs collections, the ogives are very similar to Rock Creek and Fort Churchill. The contribution of nails is essentially the same at all the sites, except for Sand Springs which had extremely poor preservation conditions for ferrous metals. All of the other artifact classes are, for the most part, similarly represented. The one notable exception is ceramics, which are abundant at all sites but the Fort Churchill guardhouse. It is interesting that the three Rock Creek buildings have remarkably similar artifact patterns, especially the two buildings at the stage station. This suggests an equivalent time range/use for the sites.

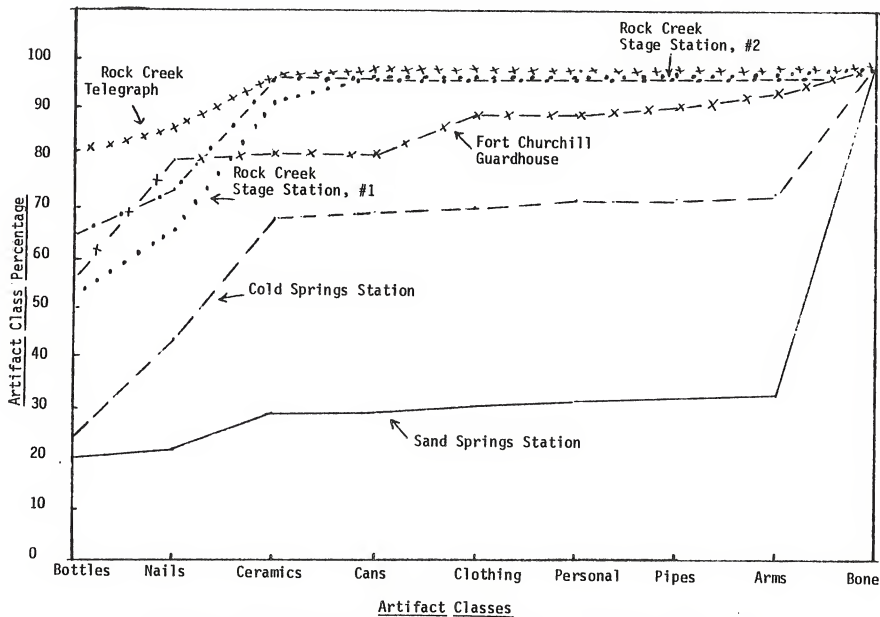


FIGURE 15. CUMULATIVE PERCENTAGE CURVES FOR ROCK CREEK AND ADJACENT SITES

VARIABILITY IN ARTIFACT CLASSES

Several classes are sufficiently diverse to justify further discussion.

Bottle Glass

Bottle glass in the collection is, for the most part, broken into small unidentifiable fragments that vary only by color. Table 5 lists the color categories distinguished and their relative occurrence. Colors can be used to infer bottle contents but only in the most general way; thus, olive green or amber green glass suggests a pre-1880 ale, stout, or other cheap alcoholic beverage, amber/brown a 20th century beer bottle, and green a wine or champagne bottle. The actual number of bottles represented by the unidentifiable glass is impossible to estimate. Obviously, the frequency of glass fragments is affected by the size and thickness of the bottle, among other things. It is, however, possible to give a minimum number of bottles by using rim fragments since rims are much less likely to shatter into a large number of pieces. Furthermore, the relative occurrence of rim colors is a general clue to the proportions of different kinds of bottles in the collection. Table 6 gives this information for building 1. The relative occurrence of base fragments is also tabulated as a second independent estimate of minimum bottle numbers and relative occurrence of different kinds of bottles. Not much of the bottle glass could be identified and only one manufacturer could be named -- Lea and Perrins. Table 7 lists the identified bottle fragments from the two site complexes. In general the bottles suggest an 1880s date, with nothing dating to the 1860s and only a little to the 1870s.

	Stage Station Building 1		Stage Station Building 2		Telegraph Station	
<u>Color</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
Aqua/green	1172	58.6	311	64.3	1955	74.7
Olive green	53	2.6	20	4.1	220	8.4
Amber brown	266	13.3	104	21.5	292	11.2
Clear	422	21.1	33	6.8	97	3.7
Amethyst	83	4.2	14	2.9	53	2.0
Blue	4	0.2	2	0.4	0	0.0
TOTAL	2000	100.0	484	100.0	2617	100.0

SAND SPRINGS

<u>Color</u>	<u>Frequency</u>	<u>Percentage</u>
Aqua/green	330	38.7
Olive green	14	1.6
Amber/brown	3	0.4
Clear	506	59.3
Amethyst	0	0.0
TOTAL	853	100.0

COLD SPRINGS

<u>Color</u>	<u>Frequency</u>	<u>Percentage</u>
Aqua/green	218	70.6
Olive green	19	6.2
Amber/brown	3	1.0
Clear	39	12.6
Amethyst	30	9.7
TOTAL	309	100.1

TABLE 5. UNIDENTIFIED GLASS FRAGMENTS AT THE ROCK CREEK SITES
AND TWO NEARBY PONY EXPRESS STATIONS

MINIMUM NUMBER OF BOTTLES CALCULATED FROM RIM FRAGMENTS

<u>Color</u>	Stage Station Building 1		Stage Station Building 1		Telegraph Station	
	<u>Minimum #</u>	<u>%</u>	<u>Minimum #</u>	<u>%</u>	<u>Minimum #</u>	<u>%</u>
Aqua/green	24	57.1	8	80.0	27	79.4
Olive green	2	4.8	2	20.0	2	5.9
Amber/brown	3	7.1	0	0.0	2	5.9
Clear	11	26.2	0	0.0	3	8.8
Amethyst	2	4.8	0	0.0	0	0.0
TOTAL	42	100.0	10	100.0	34	100.0

MINIMUM NUMBER OF BOTTLES CALCULATED FROM BASE FRAGMENTS

<u>Color</u>	Stage Station Building 1		Stage Station Building 2		Telegraph Station	
	<u>Minimum #</u>	<u>%</u>	<u>Minimum #</u>	<u>%</u>	<u>Minimum #</u>	<u>%</u>
Aqua/green	8	38.1	3	60.0	17	77.3
Olive green	1	4.8	1	20.0	0	0.0
Amber/brown	3	14.3	0	0.0	4	18.2
Clear	7	33.3	1	20.0	1	4.5
Amethyst	2	9.5	0	0.0	0	0.0
TOTAL	21	100.0	5	100.0	22	100.0

TABLE 6. MINIMUM NUMBER OF BOTTLES AT THE ROCK CREEK SITES

<u>Bottle</u>	<u>CR-NV-03-1119 (BOTH BUILDINGS)</u>	<u>CR-NV-03-1120</u>
Wine/Champagne	10	6
Whiskey	0	1
Ale	1	0
Soda	1	0
Bitters	2	1
Medicine	5	0
Pickle	1	1
Spice	2	5
Lea and Perrins		
Worcestershire Sauce	1	1

TABLE 7. IDENTIFIABLE BOTTLE FRAGMENTS AT ROCK CREEK

In addition several fragments are 1900- World War I vintage and many are completely modern. It is clear that the buildings at Rock Creek have been sporadically occupied over a long period of time but that the main occupation is not as early as either Cold Springs or Sand Springs pony express stations.

Ceramics

The vast majority of ceramic container fragments from all of the Rock Creek sites is an undecorated ironstone-whiteware. Salt glazed stoneware fragments, probably from crocks, with a dark reddish brown exterior glaze make up most of the remainder. No maker's marks are present to allow identification of manufacturers. Table 8 gives a breakdown. Most of the decorated whiteware is from Building 1 at the Rock Creek stage station and the telegraph station and is almost evenly divided between an unidentified embossed design and a blue transfer floral design.

<u>Ceramic Type</u>	<u>1119-Bldg. 1</u>	<u>1119-Bldg. 2</u>	<u>1120</u>
Ironstone-Whiteware, undecorated	927	155	284
Ironstone-Whiteware, decorated	6		6
Creamware, undecorated	27		
Crockery, salt glazed, dark reddish brown, undecorated	21	14	32
Crockery, salt glazed, gray, undecorated	9		
Earthenware, unglazed, undecorated	5		
Earthenware, salt glazed, dark brown, undecorated	1	2	
Chinese stoneware, gray glaze, blue decoration	1		
Porcelain, white, undecorated	5		
Porcelain, white, decorated	2	1	
Crockery, salt glazed, brown glaze, undecorated			1

TABLE 8. CERAMIC VARIATION AT THE ROCK CREEK SITES

Cans

Many of the cans collected at the Rock Creek sites are completely modern and have not been studied. Most of the others are so fragmented and decomposed that it is difficult to give precise information about their variability. There are, however, several cans in the collection that are sufficiently preserved to allow a statement of variability. Almost all of the cans range from 4 to 5 inches in height and 3 to 4 inches in diameter, the standard sizes for food cans. The hole-in-top, open-top, and lapped seam methods have been used to manufacture the cans (see Fontana and Greenleaf 1962:68-73). Table 9 shows the relative occurrence of the methods. The hole-in-top is the earliest, finally disappearing around the turn of the century, while the others achieved general acceptance by 1922 and continue today (ibid.). Lids and modern cans are included in the table but have not been figured into the artifact class percentages given earlier.

<u>Can Type</u>	<u>1119-Bldg. 1</u>	<u>1119-Bldg. 2</u>	<u>1120</u>
Hole-in-top, soldered seam	20	11	15
Open-top, locked seam	24	14	8
Lapped Seam	26	22	5
Hole-in-top lids	37	1	
Concentric ridge lids	15	7	15
Strip-top lids or cannister	24	12	
Modern aluminum or tin, beverage can	34	8	1
Seafood cans		6	5
Tobacco cans	1	1	2

TABLE 9. VARIATION IN CANS AT THE ROCK CREEK SITES

Nails

The vast majority of the nails collected at the Rock Creek sites are cut common nails but wire common nails and horseshoe nails are also present with some frequency. Table 10 shows the breakdown of nail types.

<u>Nail Type</u>	<u>1119-Bldg. 1</u>	<u>1119-Bldg. 2</u>	<u>1120</u>
Cut common	247	44	59
Cut finishing	1	1	1
Cut brad	2		1
Cut spikes	2		
Wrought common		1	
Wire common	24	1	13
Wire finishing	2		
Wire staples	4		3
Horseshoe	13	4	73
Cut L-head	2		
Wrought spike, chisel point	2		
Cut fragments	140	17	62
Wire fragments	1	2	1

TABLE 10. NAIL VARIABILITY AT THE ROCK CREEK SITES

SPATIAL VARIABILITY IN ARTIFACT CLASSES

Human behavior is never the same from one point in space to another and the occupants of the Rock Creek sites were no exception. The spatial

variability of behavior can be studied through the geographical distribution of artifacts. Artifacts are used here to examine three dimensions of spatial variation in human behavior: (1) the range and complexity of human activities; (2) behavior patterns; and (3) the intensity of activities. A crude measure of the range and/or complexity of human activities is the number of artifact classes in the collection. A high number suggests a relatively wide range of activities and/or a complex activity requiring the use of many different kinds of artifacts, while a low number is indicative of the opposite. Tables 11-13 give the spatial variation in artifact class diversity at the 3 Rock Creek sites. Behavior patterns can be studied with the use of artifact ratios. Similar ratios for different artifact classes in several rooms, for example, are suggestive of the same pattern of behavior, assuming that depositional and post-depositional processes responsible for the archaeological record have not been greatly different (see, for example, Shiffer 1976). Artifact ratio patterns for the three buildings are given in Tables 11-13. Finally, the intensity of human activities occurring at a given place can be estimated by calculating artifact density, the number of artifacts per unit area or volume of space. Density, of course, reflects not only the intensity of activity but also the amount of time during which the activity takes place. Tables 11-13 also give spatial variability in artifact density at the 3 Rock Creek sites.

Rock Creek Stage Station, Building 1

The location of household activities and the pattern of refuse disposal are quite clear from artifact ratios and densities. Relatively high ratios of ceramics are found just outside the walls of Rooms 2, 3,

Provenience	Nails	Bottles	Cans	Ceramics	Tack	Bone	Diversity	Artifact Density (#/square ft.)
1A	0.05	0.44	0.04	0.45	0.00	0.02	17	.58
1B	0.23	0.64	0.02	0.33	0.00	0.01	10	.30
1C	0.24	2.40	0.14	0.12	0.00	0.00	10	.18
1D	0.00	*	0.00	0.00	0.00	0.00	1	.27
1E	0.03	1.75	0.03	0.38	0.00	0.03	7	.52
1F	0.11	0.53	0.02	0.29	0.00	0.12	14	.49
1G	0.14	0.38	0.04	0.22	0.00	0.01	13	.57
1H	0.07	0.25	0.25	0.00	0.00	0.00	8	.20
2	0.04	0.14	0.00	0.30	0.00	0.02	9	.21
3	0.00	0.08	0.00	0.04	0.00	0.40	5	.13
4	0.00	0.00	0.00	0.00	0.00	0.00	1	.01
5	0.01	0.84	0.02	0.02	0.00	0.00	5	.
6	0.01	0.84	0.02	0.02	0.00	0.00	9	.28
A1	0.01	0.68	0.09	0.07	0.00	0.00	9	.16
A2	0.01	3.71	0.02	0.06	0.00	0.00	8	.12
A3	0.01	1.20	0.07	0.15	0.00	0.05	9	.23
A4	0.08	0.38	0.07	0.06	0.00	0.00	12	.80
A5	0.00	1.27	0.00	0.37	0.00	0.01	8	.23
A6	0.20	0.42	0.00	0.38	0.00	0.00	18	1.01
A7	0.07	0.57	0.04	0.23	0.00	0.00	10	.11
A8	0.04	3.83	0.05	0.18	0.00	0.00	7	.06
A9	0.02	1.04	0.00	0.12	0.00	0.00	7	.04
A10	0.00	0.33	0.33	0.00	0.00	0.00	1	.00
A11	0.00	0.50	0.50	0.12	0.00	0.00	4	.01
A12	0.00	17.00	0.00	0.03	0.00	0.00	3	.03
A13	0.00	0.00	0.00	0.00	0.00	0.00	2	.02
A14	0.00	3.75	0.00	0.12	0.00	0.00	2	.04
A15	0.00	0.00	0.00	0.00	0.00	0.00	5	.00
A16	0.00	0.77	0.00	0.21	0.00	0.00	6	.10
A17	0.00	0.41	0.14	0.00	0.00	0.00	3	.05

TABLE 11. ARTIFACT RATIOS, DIVERSITY, AND DENSITIES FOR SPATIAL AT ROCK CREEK STAGE STATION, BUILDING 1 (CR-NV-03-1119)

Provenience	Nails	Bottles	Cans	Ceramics	Tack	Bone	Diversity	Artifact Density (#/square ft.)
1A	0.00	0.44	0.08	0.00	0.00	0.00	4	.02
1B	0.00	0.00	0.00	0.00	0.00	0.29	4	.01
1C	0.00	2.50	0.08	0.00	0.00	0.00	4	.04
1D	0.00	0.11	0.00	0.00	0.00	0.00	4	.02
2	0.00	*	0.00	0.00	0.00	0.00	1	.02
3A	0.00	1.50	0.11	0.00	0.00	0.00	5	.02
3B	0.33	0.20	0.00	0.09	0.00	0.00	5	.03
3C	0.23	1.20	0.01	0.12	0.00	0.00	7	.28
3D	0.00	0.35	0.07	0.41	0.00	0.00	5	.08
4A	0.29	0.80	0.12	0.29	0.00	0.00	5	.01
4B	0.00	0.00	0.00	0.00	0.00	0.00	0	.00
4C, 4F	0.00	0.27	0.03	0.06	0.00	0.03	7	.07
4D, 4E	0.07	0.60	0.23	0.07	0.00	0.00	5	.02
4G	0.00	0.00	0.00	0.00	0.00	0.00	0	.00
4H	0.06	0.50	0.00	0.38	0.00	0.39	5	.04
A1	0.00	0.00	0.00	0.00	0.00	0.00	2	.00
A2	0.00	*	0.00	0.00	0.00	0.00	1	.01
A3	0.00	1.00	0.33	0.00	0.00	0.00	2	.04
A4	0.00	0.00	0.00	0.00	0.00	0.00	0	.00
A5	0.00	1.00	0.33	0.00	0.00	0.00	3	.00
A6	0.14	0.14	0.60	0.00	0.00	0.00	6	.01
A7	0.10	0.47	0.01	0.11	0.00	0.00	8	.26
A8	0.00	0.33	0.00	0.00	0.00	0.00	5	.02
A9	0.00	0.14	0.33	0.00	0.00	0.00	4	.02
A10	0.00	0.33	0.00	0.00	0.00	0.00	3	.01
A11	0.00	0.14	1.00	0.00	0.00	0.07	5	.02
A12	0.03	0.97	0.21	0.27	0.02	0.00	11	.10
A13	0.07	1.72	0.06	0.04	0.00	0.12	9	.10
A14	0.00	0.21	0.21	0.10	0.00	0.00	5	.02
A15	0.02	0.71	0.10	0.02	0.00	0.00	8	.12
A16	0.07	0.97	0.02	0.46	0.00	0.00	7	.19
A17	0.04	0.46	0.05	0.44	0.00	0.00	7	.10
A18								
A19								
A20								

TABLE 12. ARTIFACT RATIOS, DIVERSITY, AND DENSITIES FOR SPATIAL UNITS AT ROCK CREEK STAGE STATION, BUILDING 2 (CR-NV-03-1119)

Provenience	Nails	Bottles	Cans	Ceramics	Tack	Bone	Diversity	Artifact Density (#/square ft.)
1A	0.00	1.00	0.30	0.00	0.00	0.13	5	.04
1B	0.00	0.00	0.00	0.00	0.00	0.00	0	.00
2A	0.04	1.50	0.09	0.00	0.00	0.04	6	.03
2B	0.02	<u>3.55</u>	0.01	0.00	0.01	0.09	9	.22
3A	0.00	<u>2.67</u>	0.01	<u>0.20</u>	0.00	0.01	6	.56
3B	0.01	<u>2.93</u>	0.04	<u>0.06</u>	0.00	0.00	8	.31
4A	0.01	1.61	0.07	0.00	0.00	0.01	5	.28
4B	0.00	0.14	1.00	0.00	0.00	0.00	3	.06
5	0.00	0.07	0.03	0.00	0.00	0.00	5	.96
6	0.04	1.67	0.00	0.26	0.00	0.00	6	.18
A1	0.01	<u>3.32</u>	0.01	<u>0.17</u>	0.00	0.00	7	.10
A2	0.00	0.50	0.02	<u>0.45</u>	0.00	0.05	8	.04
A3	0.08	0.89	0.00	<u>0.03</u>	0.10	0.00	9	.36
A4	<u>0.19</u>	0.77	0.00	0.04	0.15	0.00	7	.32
A5	<u>0.12</u>	0.97	0.01	0.12	0.06	0.00	12	.28
A6	<u>0.05</u>	2.20	0.00	<u>0.15</u>	0.00	0.00	12	.63
A7	<u>0.04</u>	<u>3.53</u>	0.01	<u>0.06</u>	0.00	0.03	8	.49
A8	<u>0.06</u>	<u>2.32</u>	0.01	0.04	0.02	0.02	11	.23
A9	<u>0.03</u>	<u>2.69</u>	0.04	0.09	0.00	0.00	9	.22
A10	0.00	0.94	0.01	0.24	0.00	0.00	11	.25
A11	0.03	<u>2.50</u>	0.02	<u>0.02</u>	0.02	0.00	9	.09
A12	0.04	<u>3.45</u>	0.00	0.00	0.00	0.09	5	.15
A13	0.00	<u>7.29</u>	0.00	0.01	0.00	0.00	7	.11
A14	0.01	<u>4.80</u>	0.03	0.05	0.00	0.00	7	.11
A15	0.01	1.07	0.00	0.01	0.00	0.00	6	.19
A16	0.01	<u>3.27</u>	0.01	0.00	0.01	0.00	6	.12

TABLE 13. ARTIFACT RATIOS, DIVERSITY, AND DENSITIES FOR SPATIAL UNITS AT ROCK CREEK TELEGRAPH STATION (CR-NV-03-1120)

and 4 and inside Room 2 (areas 1A, 1B, 1G, 1F, and A5-A7). Similarly, the highest ratios of nails occur in this general area, along with the highest artifact densities and diversity. As at Cold Springs and Sand Springs Pony Express stations, it appears that refuse was thrown just outside the household areas, regardless of whether it fell into the building or outside its walls. Bottle ratios are generally not high at all, in comparison to other 19th century historic sites in the region. The highest bottle ratios, however, tend to occur in places rather far removed from the household activities, suggesting that large objects were intentionally tossed away from the center of station activities.

Rock Creek Stage Station, Building 2

The best evidence for household activities in Building 2 is in Room 3. High ceramic, bottle, and nail ratios are found here, and there is a continuous scatter of high density and diverse refuse just outside its walls with similar artifact ratios. Area 7, outside the west wall of Room 4, is somewhat of a puzzle. It has one of the highest artifact densities at the site, and has artifact ratios quite similar to those in and around Room 3. This one rather remote area was apparently used to dump household garbage. Likewise, just inside the south wall of Room 4 is found a light density refuse zone with artifact ratios similar to other household dumps. In general artifact densities are very low in and around this building, suggesting a low intensity, or a very short, use for activities associated with the household. Negative evidence suggests, in fact, that Building 2 was used as a corral/stable with only minimal use by the station attendants. Strata tests into Room 1 strongly suggest a deep manure deposit, adding support to this interpretation (see section on "Stratigraphy").

Rock Creek Telegraph Station

The highest nail, ceramics, and bottle ratios are concentrated just outside the walls of Room 4, both inside and outside the building. In addition the highest artifact densities and diversities are in these areas. This part of the archaeological record, then, suggests that the center of household activities is Room 4, an hypothesis further supported by the presence of a fireplace. Bottle ratios are very high almost everywhere in and around the telegraph station, with the lowest ratios occurring just outside the eastern wall of Room 1. Room 1 is also unusual in having very low artifact densities, contrasting with the relatively high densities found elsewhere at the station. In contrast to the Rock Creek stage station, ceramic ratios are generally low in all places except a few collection units; however, the density of artifacts is very high in comparison to the stage station buildings.

CONCLUSIONS AND RECOMMENDATIONS

The preliminary study of the documentary and archaeological records at the Rock Creek stage and telegraph station has allowed some progress toward the goals outlined in "Goals and Research Strategies." Several historical statements about the stations that have been supported by the study are given in this chapter, along with a set of recommendations for future management of the sites at Rock Creek.

SITE IDENTIFICATION

The Rock Creek stage station is almost certainly the "Cold Springs" stage station used by the Overland Mail Company and Wells Fargo Company from about 1863 to 1869. Documentary data are sparse and no precise information about the location of the station could be found; however, the archaeological record supports an 1860-1880 date and activities that would be expected at a stage station. The two buildings at the site have remarkably similar artifact patterns (refer to Figure 15), suggesting an equivalent time range and/or use. Building 1 has a much denser and diverse cultural deposit than does Building 2, however, and appears to have been the focal point of human activities. As at Cold Springs and Sand Springs pony express stations, refuse is spread in a thin sheet around both buildings but is concentrated in the doorways and around the walls of one or a few rooms. The presence of two fireplaces, high walls, and windows in these rooms at Building 1 supports their use as residences where eating, sleeping, and other day-to-day activities took place. Other rooms could not be positively associated with particular activities, except for Room 6, Building 1 and Room 1, Building 2. Both of these have deep organic deposits and suggest their use as corrals or stables. In

addition several horseshoe nails were recovered from Room 3, Building 2 and may be indicative of the activities of farriers. Unlike the nearby pony express stations, bone refuse at the Rock Creek sites is almost non-existent and, when it does occur, is usually post-depositional rodent or rabbit remains. A dump area away from the site is strongly suggested but, as nothing was turned up by the survey, it is also possible that the diet included little meat. The total artifact inventory at the Rock Creek stage station is small in comparison to that of Sand Springs. In part the paucity can be attributed to the activities of bottle hunters and other relic collectors, encouraged by the position of the site next to a major highway. Furthermore, no artifacts "diagnostic" of a stage were located. It is unlikely that a post-depositional disturbance is responsible; rather, a stage station should probably be viewed as a cluster of activities, no one of which is confined to stage stations. Indeed, the cluster itself may be no different than that in a contemporary farmhouse. Horseshoeing, eating, refuse disposal, blacksmithing, and keeping warm are likely to be found in either one.

The telegraph station is an enigma. There is no documentary evidence of its existence, and the archaeological record is inconclusive. A few possible fragments of glass telegraph insulators and a relatively large fragment of a "U.S. Tel Co" glass insulator found just north of the building alongside the old road are the only artifacts diagnostic of a telegraph station. In general the artifact pattern is almost identical to the stage station buildings (see Figure 14). The major difference is a higher percentage of bottle glass and a lower percentage of ceramics. Nothing in that part of the archaeological record examined by the project

could be used for precise dating; however, the bottle glass suggests a date that is slightly earlier than the stage station (see Table 5). There is little evidence of digging and other vandalism at the telegraph station. According to local informants, however, surface collecting of artifacts has been going on for years and a large number of telegraph insulators and other "goodies" have ended up in personal collections. (No one seems to know exactly where!) In general the archaeological record reveals human activities that are almost identical to those at the stage station and, except for the few insulator fragments, would not lead one to suspect that the building is actually a telegraph station. Telegraph equipment, however, is relatively mobile and was expensive, suggesting that it was carefully removed upon abandonment of a station. Consequently, the archaeological record is likely to be poor. It is possible that a careful excavation of the building would give more information about an archaeological pattern that is "diagnostic" of telegraph stations.

SIGNIFICANCE

Evaluation of the significance of the Rock Creek sites as a "cultural resource" followed the procedure used at Fort Churchill (Hardesty 1978). Six criteria are used to rate the three buildings along a scale from 0 to 5. Uniqueness is the extent to which a site is a "rare" cultural resource, one of a kind. Architectural integrity measures the site by the preservation of the standing remains. Stratigraphic integrity is the completeness, or lack of disturbance, of the stratigraphic record. A site that has been extensively vandalized, for example, would receive a "0" or a "1" while an undisturbed site would

receive a "5." Artifact pattern value is the extent to which the artifacts recovered from a site are diagnostic of the human activities that have taken place there, the time range, and so forth. The assigned score will reflect preservation and disturbance of the archaeological record, as well as the intrinsic usefulness of individual artifacts for time and use identification. Value of the documentary record is a measure of the amount of information in and the accuracy of the site's written record. The final criterion used to rate the Rock Creek sites is the degree of correspondence between the written record and the archaeological record, information consistency. A site is considered to be more valuable as a cultural resource if the archaeological record does not agree with the written record; that is, the less duplication of information there is, the more valuable is a given source of information. Table 14 gives the significance ratings.

RECOMMENDATIONS

The Rock Creek sites are unusual because of their well preserved architectural remains, comparable in many ways to nearby Cold Springs and Sand Springs pony express stations. All of the buildings need some stabilization to prevent loose boulders from falling and to strengthen high walls but, with two exceptions, none requires immediate attention. The two exceptions are the southwest corner of Building 1 at the stage station and the east wall of Room 4 at the telegraph station. Both are in danger of collapsing into old wells or privies.

Little of archaeological value remains on the surface of either site. Relic collecting over the years has removed all the "goodies" and the present project has collected a large sample of the remaining artifacts. It is unlikely that visitors would have much impact upon this part of

	<u>Stage Station Building 1</u>	<u>Stage Station Building 2</u>	<u>Telegraph Station</u>
Uniqueness	2	2	4
Architectural Integrity	4	2	4
Stratigraphic Integrity	1	4	4
Artifact Pattern Value	2	2	2
Value of the Documentary Record	1	1	0
Information Consistency	3	3	n/a

TABLE 14. SIGNIFICANCE RATINGS FOR THE ROCK CREEK SITES

the archaeological record. The subsurface archaeological record is a little more complicated. Building 1 at the stage station has been extensively vandalized, and there is little of archaeological value that can be retrieved; furthermore, as previously mentioned, the stage station artifact pattern is not easily diagnosed. Accordingly, intensive excavation is not warranted. The other buildings, however, are less disturbed and excavation in a few selected areas is recommended to resolve a few problems. In Building 2 at the stage station, for example, Room 1 is definitely a corral but the other rooms are puzzling. Thus, Room 3 shows some evidence of both horseshoeing/blacksmithing and "living room" activities. Did station attendants actually live in this room or was it just a refuse disposal zone? The telegraph station is even more intriguing. Room 4 is obviously a living area and Room 3 appears to have been a general purpose open area, but what about the other rooms? Further excavation may give some clues to the spatial arrangement of activities in a telegraph station. Indeed, the subsurface archaeological record may give the first convincing evidence that the building was actually used as a telegraph station.

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